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|-----------------|-------------|----------------------|---------------------|
| 09/416.501      | 10/08/99    | DOYLE                | B 42390.P4514D      |

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**EXAMINER**

ORTIZ.E

**ART UNIT****PAPER NUMBER**

2815

**DATE MAILED:**

12/09/99

Please find below and/or attached an Office communication concerning this application or  
proceeding.

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**09/416,501**

Applicant(s)  
**Doyle**

Examiner  
**Edgardo Ortiz**

Group Art Unit  
**2815**



☒ Responsive to communication(s) filed on Oct 8, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 14-21 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 14-21 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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### **DETAILED ACTION**

This Office Action is in response to an application filed October 8, 1999 which is a divisional application of application 09/107,398.

#### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The abstract of the disclosure is objected to because it describes a non-elected invention. Correction is required. See MPEP § 608.01(b).

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The term "damaged surface" in claims 15 and 16 is a relative term which renders the claim indefinite. The term "damaged surface" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is required that the applicant provide explanation for this term and its relevance to the proposed invention.

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***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

Claims 20 and 21 are rejected 102 (e) as being anticipated by Horiba (U.S. Patent No. 5,744,866).

With regard to claim 20, Horiba teaches a substrate (1) having a first oxide film (2), a conductive layer (4) formed over the first oxide film, a second oxide film (5) and a semiconductor film (6) formed over the second oxide film (5) and having at least one active device. See column 5, lines 6-35.

With regard to Claim 21, Hiroba teaches a conductive layer which can be made of a refractory metal, such as Tungsten, which is a noble metal. See column 5, lines 56-59.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 14-21 are rejected under U.S.C. 103(a) as being unpatentable over Horiba (U.S. Patent No. 5,744,866). Horiba discloses a low resistance ground wiring in a semiconductor device. With regard to claims 14 and 21, Horiba teaches a substrate (1) having a semiconductor film (comprised of 2 and 3) and a conductive layer (4) which is bonded to the semiconductor film formed on the substrate (1). It would have been obvious to someone with ordinary skill in the art to provide an active device over semiconductor film as it is a common practice and principle on the fabrication of semiconductors.

With regard to Claim 16, A "product by process" claim is directed to the product per se, no matter how actually made, In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324; In re Avery, 186 USPQ 161; In re Wertheim, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); In re Marosi et al, 218 USPQ 289; and particularly In re Thorpe, 227 USPQ 964, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that applicant has the burden of proof in such cases, as the above case law makes clear.

With regard to Claim 17, Hiroba teaches a conductive layer which can be made of a refractory metal, such as Tungsten, which is a noble metal. See column 5, lines 56-59.

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With regard to Claim 18, Horiba teaches a semiconductor film which has an oxide film (20). See column 5, lines 13-17.

With regard to Claim 19, Horiba teaches a conductive film, which can include a refractory metal, formed on a oxide film (3). See column 5, lines 13-17.

### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Furuya (U.S. Patent No. 5,412,231) discloses a semiconductor device having organically doped structure which includes a non-doped layer applied on a substrate, an electron supply layer applied thereon and a metal layer applied on the electron supply layer. Cambou (U.S. Patent No. 5, 283,545) discloses semiconductor device including very low sheet resistivity buried layer.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Edgardo Ortiz (Art Unit 2815), whose telephone number is (703) 308-6183. Any inquiry of a general nature or relating to the status of this application should be directed to the Group 2800 receptionist whose telephone number is (703) 308-0956.

EO/AU 2815

12/3/99



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